It is possible to consider applying the SI prefixes to unimaginably large numbers by simply adding extra Greek letter prefixes from the table Γ or γ being placeholders. And also to consider grouping the prefixes in threes to make the threat of error less when reading.

Consider

$1.2345 \times 10^{12345678901234567890123456789}$

Dividing the exponent by 30 gives 411,522,630,041,152,263,004,115,226.3

Considering the integer part of the resulting number, replace each digit by the Greek letter prefix from the table:

ΞΔΔΠΘΘΣΛΓΓΞΔΔΠΘΘΠΛΓΓΞΔΔΠΘΘΣ

Now insert the groups of three markers with small capital Roman numerals superscripts:

ΞΔΔ$^{\text{I}}$ΠΘΘ$^{\text{I}}$ΣΛΓ$^{\text{II}}$ΓΞΔ$^{\text{I}}$ΔΠΘ$^{\text{I}}$ΘΠΛ$^{\text{II}}$ΓΓΞ$^{\text{I}}$ΔΔΠ$^{\text{I}}$ΘΘΣ

Then consider the SI Prefix range by looking at the decimal fraction part 0.3 and multiply by 30 to give 9. After all the rest of the exponent is dealt with in the Greek prefixes, the number to be represented is 1.2345×10^{9} or 1.2345 G. Hence the resulting magnitude is

1.2345 ΞΔΔ$^{\text{I}}$ΠΘΘ$^{\text{I}}$ΣΛΓ$^{\text{II}}$ΓΞΔ$^{\text{I}}$ΔΠΘ$^{\text{I}}$ΘΠΛ$^{\text{II}}$ΓΓΞ$^{\text{I}}$ΔΔΠ$^{\text{I}}$ΘΘΣG

Again,

$1.2345 \times 10^{123456789012345678901234567890123456789}$

Dividing the exponent by 30 gives 411,522,630,041,152,263,004,115,226,300.4

Considering the integer part, replace each digit by the corresponding Greek prefix

ΞΔΔΠΘΘΣΛΓΓΞΔΔΠΘΘΠΛΓΓΞΔΔΠΘΘΣΛΓΓ

And then group the prefixes in threes

ΞΔΔ$^{\text{III}}$ΠΘΘ$^{\text{I}}$ΣΛΓ$^{\text{I}}$ΓΞΔ$^{\text{II}}$ΔΠΘ$^{\text{I}}$ΘΠΛ$^{\text{I}}$ΓΓΞ$^{\text{II}}$ΔΔΠ$^{\text{I}}$ΘΘΣ$^{\text{I}}$ΛΓΓ

Then considering the decimal fraction 0.4 and multiply by 30 to give 12. After all of the rest of the exponent is dealt with in Greek prefixes the number to be represented is 1.2345×10^{12} or 1.2345 T. Hence:

1.2345 ΞΔΔ$^{\text{III}}$ΠΘΘ$^{\text{I}}$ΣΛΓ$^{\text{I}}$ΓΞΔ$^{\text{II}}$ΔΠΘ$^{\text{I}}$ΘΠΛ$^{\text{I}}$ΓΓΞ$^{\text{II}}$ΔΔΠ$^{\text{I}}$ΘΘΣ$^{\text{I}}$ΛΓΓT